

Sound Analytical Services, Inc.
ANALYTICAL & ENVIRONMENTAL CHEMISTS
4813 Pacific Hwy East • Tacoma, WA 98424
(253) 922-2310 • FAX (253) 922-5047
e-mail: SoundL@aol.com



TRANSMITTAL MEMORANDUM

DATE: December 8, 1998

TO: Jim Bonter
Olympus Environmental, Inc.
P.O. Box 1064
Kent, WA 98035

PROJECT: 8195 King County Airport

REPORT NUMBER: 77438

Enclosed are the test results for two samples received at Sound Analytical Services on December 1, 1998.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers and analytical narrative when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (253) 922-2310.

Sincerely,

Tom Boyden
Project Manager

SOUND ANALYTICAL SERVICES, INC.

Client Name	Olympus Environmental, Inc.
Client ID:	8195-A
Lab ID:	77438-01
Date Received:	12/1/98
Date Prepared:	12/4/98
Date Analyzed:	12/5/98
% Solids	77.59

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	96		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	28	24	X1
Motor Oil (>nC24-nC32)	150	48	

X1 - Chromatogram suggests this might be heavy oil

SOUND ANALYTICAL SERVICES, INC.

Client Name	Olympus Environmental, Inc.
Client ID:	8195-C
Lab ID:	77438-02
Date Received:	12/1/98
Date Prepared:	12/4/98
Date Analyzed:	12/5/98
% Solids	87.29

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	91		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	69	23	X1
Motor Oil (>nC24-nC32)	400	45	

X1 - Chromatogram suggests this might be heavy oil

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - DI1836
Date Received:	-
Date Prepared:	12/4/98
Date Analyzed:	12/4/98
% Solids	

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	82		50	150

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	20	
Motor Oil (>nC24-nC32)	ND	40	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID: DI1836
Date Prepared: 12/4/98
Date Analyzed: 12/4/98
QC Batch ID: DI1836

Extended Diesel Range by WTPH-D Modified

Compound Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	BSD Result (mg/kg)	BSD % Rec.	RPD	Flag
Diesel (>nC12-nC24)	0	502	562	112	596	119	6.1	
Motor Oil (>nC24-nC32)	0	500	508	102	538	108	5.7	

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE: (253) 922-2310 - FAX: (253) 922-5047

DATA QUALIFIERS AND ABBREVIATIONS

- B1: This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- C1: Second column confirmation was performed. The relative percent difference value (RPD) between the results on the two columns was evaluated and determined to be $\leq 40\%$.
- C2: Second column confirmation was performed. The RPD between the results on the two columns was evaluated and determined to be $> 40\%$. The higher result was reported unless anomalies were noted.
- M: GC/MS confirmation was performed. The result derived from the original analysis was reported.
- D: The reported result for this analyte was calculated based on a secondary dilution factor.
- E: The concentration of this analyte exceeded the instrument calibration range and should be considered an estimated quantity.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
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- MDL: Method Detection Limit
- N: See analytical narrative.
- ND: Not Detected
- PQL: Practical Quantitation Limit
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.
- X2: Contaminant does not appear to be "typical" product.
- X3: Identification and quantitation of the analyte or surrogate was complicated by matrix interference.
- X4: RPD for duplicates was outside advisory QC limits. The sample was re-analyzed with similar results. The sample matrix may be nonhomogeneous.
- X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike recovery was not determined due to the required dilution.
- X6: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Sample was re-analyzed with similar results.
- X7: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Matrix interference may be indicated based on acceptable blank spike recovery and/or RPD.
- X7a: Recovery and/or RPD values for this spiked analyte outside advisory QC limits due to high concentration of the analyte in the original sample.
- X8: Surrogate recovery was not determined due to the required dilution.
- X9: Surrogate recovery outside advisory QC limits due to matrix interference.

77438



ENVIRONMENTAL, INC.

CHAIN OF CUSTODY RECORD

Client/Project Name <i>King County Airport</i>				Project Location <i>Seattle</i>				<div style="text-align: center;">ANALYSES</div> <div style="transform: rotate(-45deg); transform-origin: center;">WIP-H-D-EXT</div>							
Work Order No. <i>8195</i>				Field Logbook No.											
Sampler: (Signature) <i>Jim R</i>				Chain of Custody Tape No.											
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample											
<i>8195-A</i>	<i>11/31/98</i>			<i>composite/soil</i>	<i>X</i>										
<i>8195-C</i>	<i>11/31/98</i>			<i>"</i>	<i>X</i>										
Relinquished by: (Signature) <i>Jim R</i>				Date <i>12/6/98</i>	Time <i>1145</i>	Received by: (Signature) <i>M. Hodgman</i>				Date <i>12/1/98</i>	Time <i>1145</i>				
Relinquished by: (Signature)				Date	Time	Received by: (Signature)				Date	Time				
Relinquished by: (Signature)				Date	Time	Received by: (Signature)				Date	Time				
Comments: <i>Fax results to Jim Bonte 253-395-1170</i>						ANALYTICAL LABORATORY <i>STANDARD TAT</i>									

Sound Analytical Services, Inc.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 Pacific Hwy East • Tacoma, WA 98424

(253) 922-2310 • FAX (253) 922-5047

e-mail: SoundL@aol.com



TRANSMITTAL MEMORANDUM

DATE: December 8, 1998

TO: Jim Bonter
Olympus Environmental, Inc.
P.O. Box 1064
Kent, WA 98035

PROJECT: 8195 King County Airport

REPORT NUMBER: 77439

Enclosed are the test results for two samples received at Sound Analytical Services on December 1, 1998.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers and analytical narrative when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (253) 922-2310.

Sincerely,


Tom Boyden
Project Manager

KCSlip4 35886

SEA402431

SOUND ANALYTICAL SERVICES, INC.

Client Name	Olympus Environmental, Inc.
Client ID:	B195-I
Lab ID:	77439-01
Date Received:	12/1/98
Date Prepared:	12/4/98
Date Analyzed:	12/5/98
% Solids	82.47

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	98		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	24	
Motor Oil (>nC24-nC32)	43	47	J

SOUND ANALYTICAL SERVICES, INC.

Client Name	Olympus Environmental, Inc.
Client ID:	TEST PIT
Lab ID:	77439-02
Date Received:	12/1/98
Date Prepared:	12/4/98
Date Analyzed:	12/5/98
% Solids	86.75

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	91		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	22	
Motor Oil (>nC24-nC32)	ND	43	

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE: (253) 922-2310 - FAX: (253) 922-5047

DATA QUALIFIERS AND ABBREVIATIONS

- B1: This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
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- M: GC/MS confirmation was performed. The result derived from the original analysis was reported.
- D: The reported result for this analyte was calculated based on a secondary dilution factor.
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- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
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- MDL: Method Detection Limit
- N: See analytical narrative.
- ND: Not Detected
- PQL: Practical Quantitation Limit
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- X7a: Recovery and/or RPD values for this spiked analyte outside advisory QC limits due to high concentration of the analyte in the original sample.
- X8: Surrogate recovery was not determined due to the required dilution.
- X9: Surrogate recovery outside advisory QC limits due to matrix interference.

77439



CHAIN OF CUSTODY RECORD

Client/Project Name <i>King County Airport</i>			Project Location <i>Seattle</i>			ANALYSES <i>WTPH D EXT</i>													
Work Order No. <i>8195</i>			Field Logbook No.																
Sampler: (Signature) <i>Jim</i>			Chain of Custody Tape No.																
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample															
<i>1</i> <i>8195-I</i>	<i>12/31/98</i>	<i>0910</i>		<i>Composite/Soil</i>	<i>X</i>														
<i>2</i> <i>Test PIT</i>	<i>12/31/98</i>	<i>0915</i>		<i>"</i>	<i>X</i>														
Relinquished by: (Signature) <i>Jim</i>			Date <i>12/1/98</i>	Time <i>1145</i>	Received by: (Signature) <i>M. Hodgman</i>			Date <i>12/1/98</i>	Time <i>1145</i>										
Relinquished by: (Signature)			Date	Time	Received by: (Signature)			Date	Time										
Relinquished by: (Signature)			Date	Time	Received by: (Signature)			Date	Time										
Comments: <i>Fax Results to ATTN: Jim Bouter 283-395-1170</i>					ANALYTICAL LABORATORY <i>5-day TAT</i>														

KCSlip4 35890

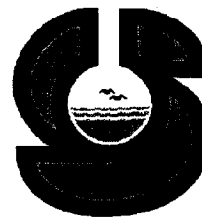
Sound Analytical Services, Inc.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 Pacific Hwy East • Tacoma, WA 98424

(253) 922-2310 • FAX (253) 922-5047

e-mail: SoundL@aol.com



TRANSMITTAL MEMORANDUM

DATE: December 7, 1998

TO: Jim Bonter
Olympus Environmental, Inc.
P.O. Box 1064
Kent, WA 98035

PROJECT: 8195 King Co. International Airport

REPORT NUMBER: 77513

Enclosed are the test results for three samples received at Sound Analytical Services on December 3, 1998.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers and analytical narrative when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (253) 922-2310.

Sincerely,

Tom Boyden
Project Manager

SOUND ANALYTICAL SERVICES, INC.

Client Name	Olympus Environmental, Inc.
Client ID:	8195-G
Lab ID:	77513-01
Date Received:	12/3/98
Date Prepared:	12/3/98
Date Analyzed:	12/4/98
% Solids	90.09

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	87		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	21	
Motor Oil (>nC24-nC32)	ND	42	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Olympus Environmental, Inc.
Client ID:	8195-H
Lab ID:	77513-02
Date Received:	12/3/98
Date Prepared:	12/3/98
Date Analyzed:	12/4/98
% Solids	89.71

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	95		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	21	
Motor Oil (>nC24-nC32)	ND	41	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Olympus Environmental, Inc.
Client ID:	8195-F
Lab ID:	77513-03
Date Received:	12/3/98
Date Prepared:	12/3/98
Date Analyzed:	12/4/98
% Solids	82.34

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	87		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	24	23	X1
Motor Oil (>nC24-nC32)	170	46	

X1 - Chromatogram suggests this might be heavy oil

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - DI1835
Date Received:	-
Date Prepared:	12/3/98
Date Analyzed:	12/4/98
% Solids	

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	93		50	150

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	20	
Motor Oil (>nC24-nC32)	ND	40	

SOUND ANALYTICAL SERVICES, INC.

Duplicate Report

Client Sample ID: 8195-G
Lab ID: 77513-01
Date Prepared: 12/3/98
Date Analyzed: 12/4/98
QC Batch ID: D11835

Extended Diesel Range by WTPH-D Modified

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
Diesel (>nC12-nC24)	0	0	NC	
Motor Oil (>nC24-nC32)	0	0	NC	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID:	DI1835
Date Prepared:	12/3/98
Date Analyzed:	12/4/98
QC Batch ID:	DI1835

Extended Diesel Range by WTPH-D Modified

Compound Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	BSD Result (mg/kg)	BSD % Rec.	RPD	Flag
Diesel (>nC12-nC24)	0	502	502	99.9	536	107	6.9	
Motor Oil (>nC24-nC32)	0	500	464	92.7	495	99.1	6.7	

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE: (253) 922-2310 - FAX: (253) 922-5047

DATA QUALIFIERS AND ABBREVIATIONS

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- X8: Surrogate recovery was not determined due to the required dilution.
- X9: Surrogate recovery outside advisory QC limits due to matrix interference.

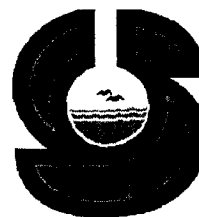
77513
511



CHAIN OF CUSTODY RECORD

Client/Project Name <i>King Co International Airport</i>			Project Location <i>Seattle</i>			<div style="text-align: center;">ANALYSES</div> <div style="transform: rotate(-45deg); border: 1px solid black; padding: 5px;">WTPH-D EXT</div>									
Work Order No. <i>8195</i>			Field Logbook No.												
Sampler: (Signature) <i>Jim R</i>			Chain of Custody Tape No.												
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample											
<i>8195-G</i>	<i>12/3/98</i>	<i>0800</i>		<i>Composites/Soil</i>	<i>X</i>										
<i>8195-E</i>	<i>12/3/98</i>	<i>0810</i>		<i>"</i>	<i>X</i>										
<i>8195-H</i>	<i>12/3/98</i>	<i>0815</i>		<i>"</i>	<i>X</i>										
<i>8195-F</i>	<i>12/3/98</i>	<i>0820</i>		<i>"</i>	<i>X</i>										
Relinquished by: (Signature) <i>Jim R</i>			Date <i>12/3/98</i>	Time <i>1130</i>	Received by: (Signature) <i>Sianny</i>			Date <i>12/3/98</i>	Time <i>1130</i>						
Relinquished by: (Signature)			Date	Time	Received by: (Signature)			Date	Time						
Relinquished by: (Signature)			Date	Time	Received by: (Signature)			Date	Time						
Comments: <i>Fax Results to ATTN. Jim Bortner @ 253-735-6625</i>					ANALYTICAL LABORATORY <i>24 HR TAT</i>										

Sound Analytical Services, Inc.
ANALYTICAL & ENVIRONMENTAL CHEMISTS
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e-mail: SoundL@aol.com



TRANSMITTAL MEMORANDUM

DATE: December 3, 1998

TO: Jim Bonter
Olympus Environmental, Inc.
P.O. Box 1064
Kent, WA 98035

PROJECT: 8195 King County Airport

REPORT NUMBER: 77428

Enclosed are the test results for two samples received at Sound Analytical Services on December 1, 1998.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers and analytical narrative when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (253) 922-2310.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tom Boyden', written over a horizontal line.

Tom Boyden
Project Manager

SOUND ANALYTICAL SERVICES, INC.

Client Name	Olympus Environmental, Inc.
Client ID:	8195-D
Lab ID:	77428-01
Date Received:	12/1/98
Date Prepared:	12/1/98
Date Analyzed:	12/2/98
% Solids	85.67

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	96		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	23	
Motor Oil (>nC24-nC32)	ND	46	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Olympus Environmental, Inc.
Client ID:	8195-J
Lab ID:	77428-02
Date Received:	12/1/98
Date Prepared:	12/1/98
Date Analyzed:	12/2/98
% Solids	90.32

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	92		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	21	
Motor Oil (>nC24-nC32)	ND	41	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - DI1829
Date Received:	-
Date Prepared:	12/1/98
Date Analyzed:	12/2/98
% Solids	

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	87		50	150

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	20	
Motor Oil (>nC24-nC32)	ND	40	

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID: DI1829
Date Prepared: 12/1/98
Date Analyzed: 12/2/98
QC Batch ID: DI1829

Extended Diesel Range by WTPH-D Modified

Compound Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	BSD Result (mg/kg)	BSD % Rec.	RPD	Flag
Diesel (>nC12-nC24)	0	502	500	99.4	526	105	5.5	
Motor Oil (>nC24-nC32)	0	500	462	92.3	490	98	6	

SOUND ANALYTICAL SERVICES, INC.

Duplicate Report

Client Sample ID: 8195-D
Lab ID: 77428-01
Date Prepared: 12/1/98
Date Analyzed: 12/2/98
QC Batch ID: DI1829

Extended Diesel Range by WTPH-D Modified

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
Diesel (>nC12-nC24)	0	0	NC	
Motor Oil (>nC24-nC32)	0	0	NC	

SOUND ANALYTICAL SERVICES, INC.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 PACIFIC HIGHWAY EAST, TACOMA, WASHINGTON 98424 - TELEPHONE: (253) 922-2310 - FAX: (253) 922-5047

DATA QUALIFIERS AND ABBREVIATIONS

- B1: This analyte was detected in the associated method blank. The analyte concentration was determined not to be significantly higher than the associated method blank (less than ten times the concentration reported in the blank).
- B2: This analyte was detected in the associated method blank. The analyte concentration in the sample was determined to be significantly higher than the method blank (greater than ten times the concentration reported in the blank).
- C1: Second column confirmation was performed. The relative percent difference value (RPD) between the results on the two columns was evaluated and determined to be $\leq 40\%$.
- C2: Second column confirmation was performed. The RPD between the results on the two columns was evaluated and determined to be $> 40\%$. The higher result was reported unless anomalies were noted.
- M: GC/MS confirmation was performed. The result derived from the original analysis was reported.
- D: The reported result for this analyte was calculated based on a secondary dilution factor.
- E: The concentration of this analyte exceeded the instrument calibration range and should be considered an estimated quantity.
- J: The analyte was analyzed for and positively identified, but the associated numerical value is an estimated quantity.
- MCL: Maximum Contaminant Level
- MDL: Method Detection Limit
- N: See analytical narrative.
- ND: Not Detected
- PQL: Practical Quantitation Limit
- X1: Contaminant does not appear to be "typical" product. Elution pattern suggests it may be _____.
- X2: Contaminant does not appear to be "typical" product.
- X3: Identification and quantitation of the analyte or surrogate was complicated by matrix interference.
- X4: RPD for duplicates was outside advisory QC limits. The sample was re-analyzed with similar results. The sample matrix may be nonhomogeneous.
- X4a: RPD for duplicates outside advisory QC limits due to analyte concentration near the method practical quantitation limit/detection limit.
- X5: Matrix spike recovery was not determined due to the required dilution.
- X6: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Sample was re-analyzed with similar results.
- X7: Recovery and/or RPD values for matrix spike(/matrix spike duplicate) outside advisory QC limits. Matrix interference may be indicated based on acceptable blank spike recovery and/or RPD.
- X7a: Recovery and/or RPD values for this spiked analyte outside advisory QC limits due to high concentration of the analyte in the original sample.
- X8: Surrogate recovery was not determined due to the required dilution.
- X9: Surrogate recovery outside advisory QC limits due to matrix interference.

77428



CHAIN OF CUSTODY RECORD

Client/Project Name <i>King County Airport</i>			Project Location <i>Seattle</i>			ANALYSES <i>WTPH-10 EN</i>													
Work Order No. <i>8195</i>			Field Logbook No.																
Sampler: (Signature) <i>[Signature]</i>			Chain of Custody Tape No.																
Sample No./ Identification			Date	Time	Lab Sample Number											Type of Sample			
<i>8195-D</i>			<i>12/01/98</i>	<i>0900</i>		<i>Composite/Serl</i>	<i>X</i>												
<i>8195-J</i>			<i>12/01/98</i>	<i>0905</i>		<i>Composite/Serl</i>	<i>X</i>												
Relinquished by: (Signature) <i>[Signature]</i>					Date <i>12/01/98</i>	Time	Received by: (Signature) <i>M. Hodgman</i>					Date <i>12/1/98</i>	Time <i>1145</i>						
Relinquished by: (Signature)					Date	Time	Received by: (Signature)					Date	Time						
Relinquished by: (Signature)					Date	Time	Received by: (Signature)					Date	Time						
Comments: <i>Fax Results to Attn: Jim Borten</i>						ANALYTICAL LABORATORY <i>24 HR TAT</i>													

Sound Analytical Services, Inc.

ANALYTICAL & ENVIRONMENTAL CHEMISTS

4813 Pacific Hwy East • Tacoma, WA 98424

(253) 922-2310 • FAX (253) 922-5047

e-mail: SoundL@aol.com



TRANSMITTAL MEMORANDUM

DATE: December 8, 1998

TO: Jim Bonter
Olympus Environmental, Inc.
P.O. Box 1064
Kent, WA 98035

PROJECT: 8195 King County International Airport

REPORT NUMBER: 77514

Enclosed are the test results for four samples received at Sound Analytical Services on December 3, 1998.

The report consists of this transmittal memo, analytical results, quality control reports, a copy of the chain-of-custody, a list of data qualifiers and analytical narrative when applicable, and a copy of any requested raw data.

Should there be any questions regarding this report, please contact me at (253) 922-2310.

Sincerely,

Tom Boyden
Project Manager

KCSlip4 35908

SEA402453

SOUND ANALYTICAL SERVICES, INC.

Client Name	Olympus Environmental, Inc.
Client ID:	8195-K
Lab ID:	77514-01
Date Received:	12/3/98
Date Prepared:	12/4/98
Date Analyzed:	12/5/98
% Solids	78.87

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	89		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	23	
Motor Oil (>nC24-nC32)	ND	46	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Olympus Environmental, Inc.
Client ID:	8195-L
Lab ID:	77514-02
Date Received:	12/3/98
Date Prepared:	12/4/98
Date Analyzed:	12/5/98
% Solids	86.76

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	94		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	23	
Motor Oil (>nC24-nC32)	ND	46	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Olympus Environmental, Inc.
Client ID:	8195-E
Lab ID:	77514-03
Date Received:	12/3/98
Date Prepared:	12/4/98
Date Analyzed:	12/5/98
% Solids	87.75

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	87		50	150

Sample results are on a dry weight basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	22	
Motor Oil (>nC24-nC32)	50	45	

SOUND ANALYTICAL SERVICES, INC.

Client Name	Olympus Environmental, Inc.
Client ID:	8195-M
Lab ID:	77514-04
Date Received:	12/3/98
Date Prepared:	12/4/98
Date Analyzed:	12/5/98
% Solids	88.85

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	90		50	150

Sample results are on a dry weight basis.

Analyte	Result	PQL	Flags
	(mg/kg)		
Diesel (>nC12-nC24)	ND	21	
Motor Oil (>nC24-nC32)	43	42	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - DI1836
Date Received:	-
Date Prepared:	12/4/98
Date Analyzed:	12/4/98
% Solids	

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	82		50	150

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	20	
Motor Oil (>nC24-nC32)	ND	40	

SOUND ANALYTICAL SERVICES, INC.

Duplicate Report

Client Sample ID: 8195-L
Lab ID: 77514-02
Date Prepared: 12/4/98
Date Analyzed: 12/5/98
QC Batch ID: DI1836

Extended Diesel Range by WTPH-D Modified

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
Diesel (>nC12-nC24)	0	0	NC	
Motor Oil (>nC24-nC32)	0	43	-200.0	X4a

SOUND ANALYTICAL SERVICES, INC.

Duplicate Report

Client Sample ID:	8195-L
Lab ID:	77514-02
Date Prepared:	12/4/98
Date Analyzed:	12/5/98
QC Batch ID:	DI1836

Extended Diesel Range by WTPH-D Modified

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
Diesel (>nC12-nC24)	0	0	NC	
Motor Oil (>nC24-nC32)	0	43	-200.0	X4a

SOUND ANALYTICAL SERVICES, INC.

Blank Spike/Blank Spike Duplicate Report

Lab ID: DI1836
Date Prepared: 12/4/98
Date Analyzed: 12/4/98
QC Batch ID: DI1836

Extended Diesel Range by WTPH-D Modified

Compound Name	Blank Result (mg/kg)	Spike Amount (mg/kg)	BS Result (mg/kg)	BS % Rec.	BSD Result (mg/kg)	BSD % Rec.	RPD	Flag
Diesel (>nC12-nC24)	0	502	562	112	596	119	6.1	
Motor Oil (>nC24-nC32)	0	500	508	102	538	108	5.7	

SOUND ANALYTICAL SERVICES, INC.

Lab ID:	Method Blank - DI1836
Date Received:	-
Date Prepared:	12/4/98
Date Analyzed:	12/4/98
% Solids	

Extended Diesel Range by WTPH-D Modified

Surrogate	% Recovery	Flags	Recovery Limits	
			Low	High
o-terphenyl	82		50	150

Sample results are on an as received basis.

Analyte	Result (mg/kg)	PQL	Flags
Diesel (>nC12-nC24)	ND	20	
Motor Oil (>nC24-nC32)	ND	40	

SOUND ANALYTICAL SERVICES, INC.

Duplicate Report

Client Sample ID: 8195-L
Lab ID: 77514-02
Date Prepared: 12/4/98
Date Analyzed: 12/5/98
QC Batch ID: DI1836

Extended Diesel Range by WTPH-D Modified

Parameter Name	Sample Result (mg/kg)	Duplicate Result (mg/kg)	RPD %	Flag
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SOUND ANALYTICAL SERVICES, INC.

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- X8: Surrogate recovery was not determined due to the required dilution.
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77514 9/3



CHAIN OF CUSTODY RECORD

Client/Project Name <i>King County International Airport</i>			Project Location <i>Seattle</i>			ANALYSES <i>WIPED OUT</i>									
Work Order No. <i>8195</i>			Field Logbook No.												
Sampler: (Signature) <i>[Signature]</i>			Chain of Custody Tape No.												
Sample No./ Identification	Date	Time	Lab Sample Number	Type of Sample											
<i>8195-K</i>	<i>12/3/98</i>			<i>Soil / Composite</i>	<i>X</i>										
<i>8195-L</i>	<i>12/3/98</i>			<i>Soil</i>	<i>1</i>	<i>X</i>									
<i>8195-E</i>	<i>12/3/98</i>			<i>Soil</i>	<i>11</i>	<i>X</i>									
<i>8195-m</i>	<i>12/3/98</i>			<i>Soil</i>	<i>1</i>	<i>X</i>									
Relinquished by: (Signature) <i>[Signature]</i>			Date <i>12/3/98</i>	Time <i>1130</i>	Received by: (Signature) <i>[Signature]</i>			Date <i>12/3/98</i>	Time <i>1130</i>						
Relinquished by: (Signature)			Date	Time	Received by: (Signature)			Date	Time						
Relinquished by: (Signature)			Date	Time	Received by: (Signature)			Date	Time						
Comments: <i>Env Results to ATTN. Jim Bonter 253-395-1170</i>					ANALYTICAL LABORATORY <i>STANDARD TAP</i>										